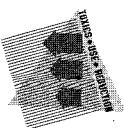


## Massachusetts High Priority Substances

*The High Priority Substances Strategy sets a priority for the services of the Massachusetts Toxics Use Reduction Program on a small subset of toxic chemicals well recognized as worthy of concern.*

*The five substances identified under this strategy in 2003 are:*

- \* Arsenic and Arsenic compounds*
- \* Dioxin and dioxin-like compounds*
- \* Lead and Lead compounds*
- \* Mercury and Mercury compounds*
- \* Trichloroethylene (TCE)*



### For more information contact:

**Massachusetts Toxics Use  
Reduction Program**

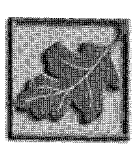
Office of Technical Assistance  
251 Causeway Street  
Suite 900  
Boston, MA 02114

617-626-1060  
[www.state.ma.us/ota](http://www.state.ma.us/ota)

Toxics Use Reduction Institute  
University of Massachusetts Lowell  
One University Ave.  
Lowell, MA 01854  
978-934-3275  
[www.turi.org](http://www.turi.org)

Department of Environmental Protection  
1 Winter Street  
Boston, MA 02108-4746  
617-292-5982  
[www.state.ma.us/dep](http://www.state.ma.us/dep)

**Massachusetts Toxics Use  
Reduction Program**

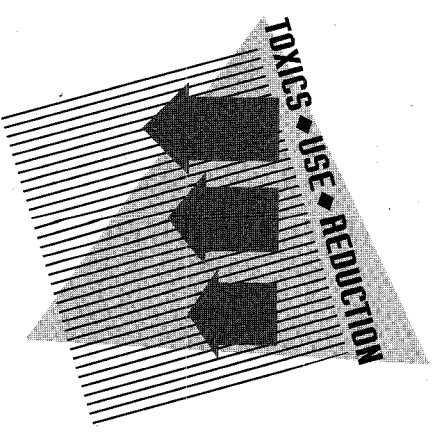


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# Massachusetts High Priority Substances Strategy

## 2003



**Massachusetts  
Toxics Use  
Reduction Program**

The Massachusetts Toxics Use Reduction Program (TURA) is initiating a new High Priority Substances (HPS) Strategy. The HPS Strategy is an effort to recognize the chemicals of greatest concern in the Commonwealth and focus program resources accordingly. The goal is to sharply reduce or eliminate the use of these substances in Massachusetts.

Chemicals were chosen from the U.S. Environmental Protection Agency (EPA) Toxics Release Inventory (TRI) Persistent, Bioaccumulative, and Toxic (PBT) list; the EPA Draft RCRA PBT list; and the TURA More Hazardous Substances list. The chemicals were chosen based upon their potential for negative impacts on human health and the environment and the level of use in Massachusetts.

	EPA TRI PBT	EPA RCRA PBT	TURA More Hazardous
Arsenic		x	x
Dioxin	x	x	x
Lead	x	x	x
Mercury	x	x	x
Trichloroethylene			x

TURA program resources will be focused on these substances and the firms that use them in order to encourage sharp reductions in their use and adoption of safer alternatives. A key component of this will be one-on-one communications with every HPS user in order to identify issues and needs and offer technical assistance.

#### TURA Program Resources

- \* One-on-one technical assistance will be offered to every HPS user
- \* HPS alternatives will be given preference in funded research
- \* Information collection and dissemination will focus on HPS alternatives
- \* Focused workshops will be offered for different industry sectors
- \* Testing of alternatives to TCE will be provided by the Surface Solutions Lab

#### Arsenic and Arsenic Compounds

The majority of arsenic use reported in Massachusetts is in the preservative used for pressure treating wood. Other uses include gallium arsenide semiconductor chips and arsine gas. It is also a contaminant in fuels used to generate electricity. Arsenic is highly toxic and is a known human carcinogen.

#### Dioxin and Dioxin-Like Compounds

Dioxin is reported in Massachusetts by manufacturers who coincidentally generate it during bleaching processes. It is also reported by power generation facilities that coincidentally manufacture these compounds as a byproduct of combustion. Dioxin is a known human carcinogen.

#### Trichloroethylene (TCE)

The majority of TCE use is for cleaning and degreasing. Many firms have found safer alternatives to TCE, as demonstrated by the more than 60% reduction in TCE use in Massachusetts from 1993 to 2000. Trichloroethylene is a recognized neurotoxin, a teratogen, and a probable carcinogen.

#### Massachusetts Toxics Use Reduction Program

#### Lead and Lead Compounds

The largest reported use of lead in Massachusetts is as a heat stabilizer in PVC plastic and rubber elastomers. The major end-users of these compounds are manufacturers of coated wire and cable. Lead is also used by these industries as a colorant. The electronics industry uses lead in soldering and board finishes. It is also used in various metal products and in molten baths for heat-treating. Widely recognized as a neurotoxin, a reproductive toxin, and a possible carcinogen, lead has been targeted for phase out in electronics and electrical equipment by the European Union and many Japanese electronics manufacturers.

#### Mercury and Mercury Compounds

Mercury is used in many different products, including lighting, switches, thermostats and measuring devices. In Massachusetts, mercury is reported by product manufacturers and recyclers. Mercury is also a constituent in fuels, particularly coal. Therefore, it is reported by power generation facilities and concrete plants using coal combustion fly ash.

Mercury is well recognized as a potent reproductive toxin, and is found in many species of fish in Massachusetts waters at unsafe levels. Massachusetts is a signatory to the New England Governors and Eastern Canadian Provinces Mercury Action Plan, and has also initiated its own statewide Zero Mercury Strategy.